

REMARKS

Reconsideration of the subject application is respectfully requested. By this paper, claims 1, 13 and 16 have been canceled, claims 2-12, 14 and 17 have been amended and claims 19-22 added. Thus, claims 2-12, 14-15, and 17-22 remain pending. Support for the claim amendments can be found, for example, in at least the following portions of the application: the original claims, the specification paragraphs [0034] and [0035] and Figures 2A, 2B, 3A, 3B-1, 3B-2, and 3C

In numbered paragraph 1, claims 1-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Applicants' WO 00/18583 (hereafter "*Trovinger*") in view of U.S. Patent No. 4,304,561 issued to Shingo (hereafter "*Shingo*"). Claims 1, 13 and 16 have been canceled and the rejection with respect to these canceled claims is moot. For at least the reasons noted below, the rejection with respect to claims 2-12, 14-15 and 17-18 should be withdrawn.

The present invention is directed to folding sheet material. Figure 1a shows an exemplary embodiment of a sheet folding apparatus 100. The sheet folding apparatus 100 includes a fold blade 164 having a rounded folding surface 164b and a longitudinal axis along the x-axis of Fig. 1A. Apparatus 100 also includes at least one fold roller. Figs. 3A-3C illustrate exemplary embodiments with two fold rollers 306. A drive means 180 moves at least one of the fold blade and a fold roller into operable communication with one another such that the fold roller passes around and/or along the rounded folding surface. For example, and as shown in Figs. 3A-3C, the major axes of the fold rollers are parallel to the major axis of the fold blade and define a plane through which the fold blade passes to

place a rounded fold in the sheet material (See Figs. 3A-3C). Fig. 5 shows an exemplary embodiment with a fold roller 506 which rotates about an axis perpendicular to a longitudinal axis of fold blade 564. The folding surface 584 of fold roller 506 is shaped to conform to fold blade 564 to place a rounded fold in the sheet material.

The above-noted features are broadly encompassed by independent claims 14 and 18. Claim 14 recites that a method for folding a sheet of material comprises the steps of feeding a sheet material into an area between a fold roller and a fold blade, the fold roller comprising at least two fold roller elements biased toward each other in a first plane, and moving the fold roller and the fold blade relative to one another to form a rounded fold in the sheet. In the claim 14 method, the rounded fold is formed by moving the two fold rollers relative to the fold blade such that the fold blade and a fold portion of the sheet material pass between the two fold rollers from a first side of the first plane to a second side of the first plane. Claim 18 recites, *inter alia*, that each fold blade has a major axis in the first direction and a plane contains the major axis of the first fold roller and the major axis of the second fold roller. The drive means moves at least one of the fold blade and the plurality of fold rollers into operable communication such that the major axis of the fold blade passes through the plane.

Both the fold mechanism 210 in *Trovinger* and the film folding device in *Shingo* are quite different. Neither reference discloses the fold blade and a sheet material passing between two fold rollers from a first side of a first plane to a second side of the first plane (claim 14), or a major axis of the fold blade passing through a plane containing the major axis of the first fold roller and a major axis of the second fold roller (claim 18). Rather,

Trovinger discloses a fold blade contacting a fold roller, and *Shingo*, is silent as to the use of a fold roller with a fold blade and does not disclose moving a fold blade or a fold roller in the manner as presently claimed.

In the rejection at paragraph 1, the Examiner implies that Applicants' independent claims contain recitations "with respect to the manner in which a claimed apparatus is intended to be employed." The Examiner asserts that such recitations "do not differentiate the claimed apparatus from a prior art apparatus." However, the Examiner's reliance on MPEP §2114 is unfounded because the recitations addressed by the Examiner with respect to claim 18, are not directed to intended use as asserted by the Examiner, but rather are functional limitations of a means-plus-function element which are attributed weight when assessing patentability. That is, Applicants' claim 18 includes means-plus-function language describing a drive means for moving at least one of the fold blade and the plurality of fold rollers into operable communication such that a major axis of a fold blade passes through the plane containing the major axis of the first fold roller and a major axis of the second fold roller (claim 18). MPEP §2114 specifically notes that the discussion of case law providing guidance in interpreting the functional portion of means-plus-function limitations are provided in MPEP §§ 2181-2186. Thus, the reliance in the rejection on MPEP §2114 is improper when considering functional recitations in means-plus-function claim elements, and the rejection of independent claim 18, and thus all of dependent claims 2-12 should be withdrawn.

Further, independent claim 14, which is original claim 13 written in independent form and clarified as to the fold blade and the sheet material passing between the two fold

rollers from a first side of the first plane to a second side of the first plane, recites a method for performing a function. Thus, claim 14 is allowable.

Neither the fold mechanism in *Trovinger* and the film folding device in *Shingo*, either alone or in combination, disclose, teach or suggest Applicants' independent claims 14 and 18, when all of the features of the claim are properly considered. Applicants therefore request withdrawal of the rejections of pending claims 2-12 and 14-18.

Further, claims 19-22 distinguish over the cited documents for at least the same reasons as the independent claims from which they depend.

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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